Listing of the Claims

The following listing of claims will replace all prior versions and listings of the claims in the application:

1-10 (Canceled)

11. (Currently Amended)   A wafer processing system comprising:

at least one surface tension gradient device capable of supporting a process in a liquid meniscus, the surface tension gradient device including a proximity head including:

a head surface, the head surface having a plurality of flat surface regions;

a plurality of source inlets in at least one of the plurality of flat surface regions of the head surface; and

a plurality of source outlets in at least one of the a plurality of flat surface regions of the head surface, wherein the plurality of source inlets and the plurality of source outlets are defined by discrete holes that reside at the head surface and extend through the flat surface regions of the head surface;

an in-situ sensor for monitoring a result of the process; and

a system controller being coupled to the in-situ sensor and the surface tension gradient device, the system controller including a process recipe.

12. (Original) The system of claim 11, wherein the process can include at least one of a group of processes consisting of a cleaning process, a rinsing process, an etch process, a deposition process, and an electroplating process.

13. (Original) The system of claim 11, wherein the in-situ sensor can include at least one of a group consisting of an optical sensor and an eddy current sensor.

14. (Original) The system of claim 11, wherein the monitored result is output in real time.

15. (Canceled)
16. (Canceled)

17. (Previously Presented)   The system of claim 11, wherein the in-situ sensor is included within the surface tension gradient device.

18. (Original) The system of claim 17, wherein the meniscus includes a dry region surrounding the in-situ sensor.

19. (Original) The system of claim 11, wherein the in-situ sensor can be moved with the surface tension gradient device.

20. (Original) The system of claim 11, wherein the in-situ sensor can be moved independent from the surface tension gradient device.

21. (Canceled)

22. (Currently Amended)   The system of claim 11, wherein the liquid meniscus is supported between a surface the head surface of the proximity head and a surface of the wafer being processed, wherein the liquid meniscus is in contact with the surface of the proximity head and the surface of the wafer being processed.

23. (Currently Amended)   The system of claim 22, wherein the surface of the proximity head has a first hydrophilic property for a selected liquid and the surface of the wafer being processed has a second hydrophilic property for the selected liquid, wherein the first hydrophilic property is more hydrophilic than the second hydrophilic property.

24. (Canceled)
25. (Canceled)

26. (Currently Amended)   The system of claim 11, wherein the controller includes logic for adjusting a capability for modifying the recipe for the process in the process controller according to the monitored results.

27. (Currently Amended)   The system of claim 26, wherein the ~~logic for adjusting~~ capability for modifying the recipe for the process in the process controller according to the monitored results includes ~~logic for adjusting~~ a capability for modifying the process in real time.

28. (Currently Amended)   A wafer processing system comprising:
    a proximity head capable of supporting a process in a liquid meniscus, the liquid meniscus being supported between a head surface of the proximity head and a surface of the wafer being processed, the proximity head including:
        an in-situ sensor for monitoring a result of the process, wherein the head surface has a plurality of flat surface regions;
        a plurality of source inlets in at least one of the at least one of the plurality of flat surface regions of the head surface; and
        a plurality of source outlets in at least one of the plurality of flat surface regions of the head surface, wherein the plurality of source inlets and the plurality of source outlets are defined by discrete holes that reside at the head surface and extend through the flat surface regions of the head surface; an in-situ sensor for monitoring a result of the process; and
    a system controller being coupled to the in-situ sensor and the surface tension gradient device, the system controller including a process recipe.

29. (Currently Amended)   The system of claim 28, wherein the controller includes ~~logic for adjusting~~ a capability for modifying the recipe for the process in the process controller according to the monitored results.

30. (Currently Amended)   A wafer processing system comprising:
    a proximity head capable of supporting a process in a liquid meniscus, the liquid meniscus being supported between a head surface of the proximity head and a surface of the wafer being processed, wherein the head surface of the proximity head has a first hydrophilic property for a selected liquid and the surface of the wafer being processed has a second hydrophilic property for the selected liquid, wherein the first hydrophilic property is more hydrophilic than the second hydrophilic property, the proximity head including:

a first surface, the first surface having a plurality of flat surface regions;

a plurality of source inlets in at least one of the plurality of flat surface regions of the head surface; and

a plurality of source outlets in at least one of the plurality of flat surface regions of the head surface, wherein the plurality of source inlets and the plurality of source outlets are defined by discrete holes that reside at the head surface and extend through the flat surface regions of the head surface;

an in-situ sensor for monitoring a result of the process; and

a system controller being coupled to the in-situ sensor and the surface tension gradient device, the system controller including a process recipe, system controller including ~~logic for adjusting~~ a capability for modifying the recipe for the process in the process controller according to the monitored results in real time.